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# BRICS STI Framework Programme: Overview

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# BRICS STI Framework Programme


- The establishment of BRICS Science, Technology and Innovation Framework Programme was endorsed by BRICS Moscow Declaration on STI Cooperation in 2015;
- Funding agencies from BRICS countries signed Arrangements of BRICS STI Framework Programme in early 2016;
- The Initiative aims to support excellent research on thematic priority areas which can best be tackled by a multinational approach. Funding should facilitate cooperation among the researchers and institutions in the consortia which consist of partners from at least three of the BRICS countries.

# BRICS STI Framework Programme

## Participants: Research funding agencies from BRICS countries

Department of Science & Technology
Ministry of Science & Technology
Government of India
सत्यमेव जयते

中华人民共和国科学技术部
Ministry of Science and Technology of the People´s Republic of China

science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

МИНИСТЕРСТВО НАУКИ
И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ

FASIE

Beijing, January 2016

Finep
INOVAÇÃO E PESQUISA

CNPq
Conselho Nacional de Desenvolvimento Científico e Tecnológico

technology innovation
AGENCY

NRF National Research Foundation

NSFC

जैव प्रौद्योगिकी विभाग
Department of Biotechnology
Ministry of Science & Technology
Government of India
सत्यमेव जयते

saMRC advancinglife

RFBR RUSSIAN FOUNDATION FOR BASIC RESEARCH

WATER RESEARCH COMMISSION

# BRICS STI Framework Programme: Pilot phase 2016-2021

## 4 Calls for multilateral BRICS research projects were launched in 2016-2020:

- **Pilot BRICS STI FP Call (2016)**:
  - 10 thematic areas
  - 320 applications
  - 26 projects supported
- **2nd BRICS STI FP Call (2017)**:
  - 6 thematic areas
  - 462 applications
  - 32 projects supported
- **3rd BRICS STI FP Call (2019):**
  - 13 thematic areas
  - 331 applications
  - 35 projects supported
- **BRICS STI FP Call 2020:**
  **Response to COVID-19 global pandemic**
  - 5 call themes
  - 110 applications
  - 12 projects supported

**Framework conditions:**

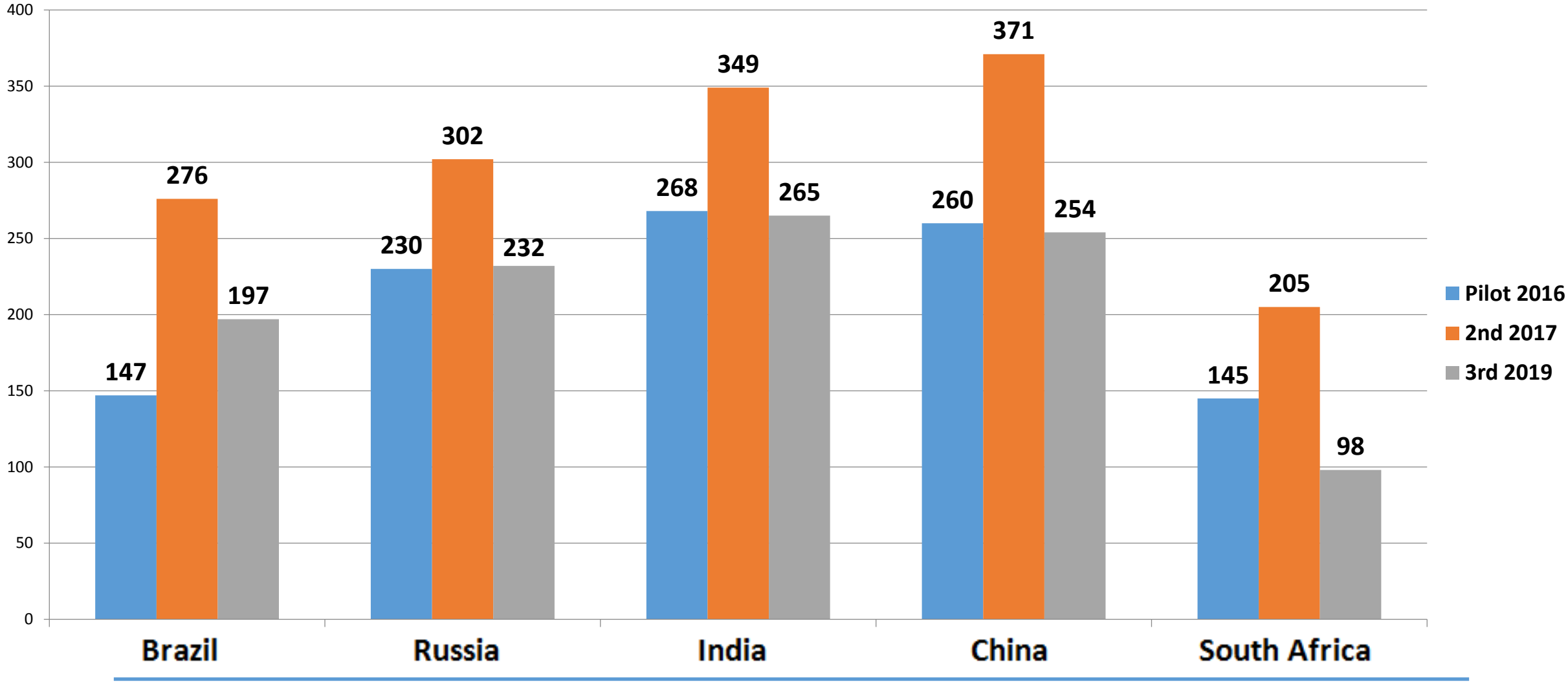
- **Virtual Common Pot**:
  Each research funding agency funds its own teams within a multilateral project
- **Target Group:**
  Consortia with partners from at least three BRICS countries
- **Eligible Applicants:**
  Researchers, research institutions and entities eligible for funding according to national regulations
- **Independent** expert-based evaluation
- **Joint Decision taking** by BRICS WG on STI Funding
- **Project duration**: 2 or 3 years

## BRICS STI FP pilot phase milestones

- 105 research projects were supported as result of 4 calls in 2016-2021;
- In its first 5 years of implementation the BRICS STI FP has contributed towards formation of a truly BRICS scientific identity;
- More than 3700 collaborators from 5 countries were involved in preparation of 1200 project proposals in response to the BRICS STI FP pilot phase calls;
- More than 1/3 of PIs from supported projects stated that without BRICS STI FP their projects would have never started at any form;
- More than half of projects led to establishment of collaboration at a higher level (e.g. between institutions).

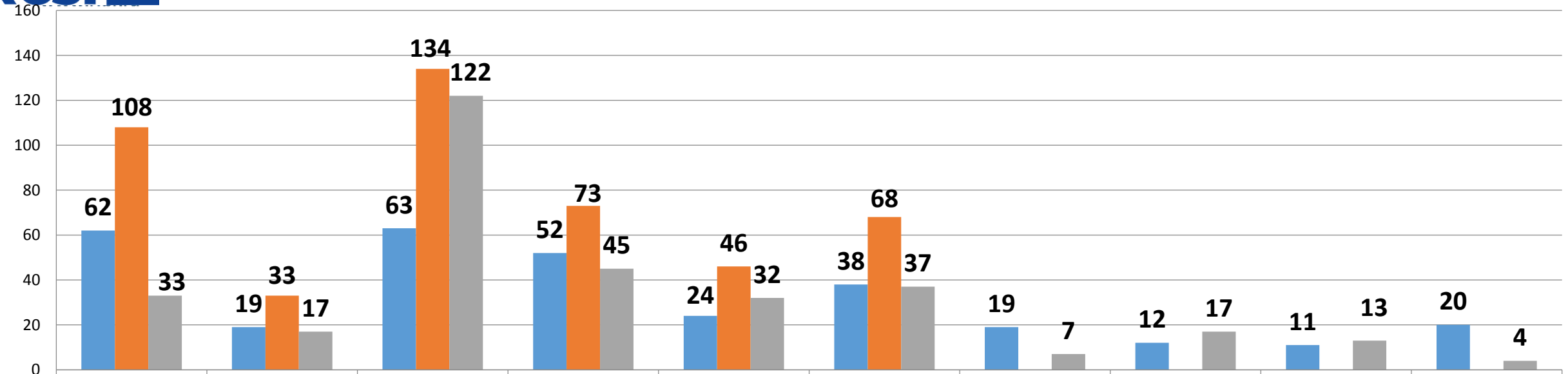
# Statistics on thematic BRICS STI FP calls

## National participants in projects



# Statistics on thematic BRICS STI FP calls

## Submitted BRICS STI applications per call theme (10 priority thematic areas for BRICS STI cooperation)




| | Biotechnology and biomedicine including human health and neuroscience | Information technologies and high performance computing | Material science including nanotechnology* | New and renewable energy, and energy efficiency | Prevention and monitoring of natural disasters | Water resources and pollution treatment | Ocean and polar science and technology | Photonics* | Astronomy* | Geospatial technology and its applications |
|---|---|---|---|---|---|---|---|---|---|---|
| Pilot Call | 62 | 19 | 63 | 52 | 24 | 38 | 19 | 12 | 11 | 20 |
| 2nd Call | 108 | 33 | 134 | 73 | 46 | 68 | | | | |
| 3rd Call | 33 | 17 | 122 | 45 | 32 | 37 | 7 | 17 | 13 | 4 |

*- not supported by Brazil in Pilot Call

# Statistics on thematic BRICS STI FP calls

| *projects* / *Thematic areas* | Pilot Call 2016 | | 2nd Call 2017 | | 3rd Call 2019 | | Total | |
|---|---|---|---|---|---|---|---|---|
| | submitted | supported | submitted | supported | submitted | supported | submitted | supported |
| Astronomy* | 11 | 3 | - | - | 13 | 2 | **24** | **5** |
| Biotechnology and biomedicine including human health and neuroscience | 62 | 5 | 108 | 6 | 33 | 2 | **233** | **13** |
| Geospatial technology and its applications | 20 | 2 | - | - | 4 | 2 | **24** | **4** |
| Information technologies and high performance computing | 19 | 2 | 33 | 3 | 17 | 3 | **69** | **8** |
| Material science including nanotechnology* | 63 | 6 | 134 | 11 | 122 | 12 | **319** | **29** |
| New and renewable energy, and energy efficiency | 52 | 2 | 73 | 6 | 45 | 3 | **170** | **11** |
| Ocean and polar science and technology | 19 | 1 | - | - | 7 | 2 | **26** | **3** |
| Photonics* | 12 | 3 | - | - | 17 | 3 | **29** | **6** |
| Prevention and monitoring of natural disasters | 24 | 1 | 46 | 2 | 32 | 2 | **102** | **5** |
| Water resources and pollution treatment | 38 | 1 | 68 | 4 | 37 | 3 | **143** | **8** |
| *Aeronautics* | - | - | - | - | 3 | 1 | **3** | **1** |

*- not supported by Brazil in Pilot Call

# Response to COVID-19 pandemic coordinated call for BRICS multilateral projects 2020

12 project selected as result of the call

| Thematic area | Number of projects |
|---|---|
| Research and development of COVID-19 vaccines and drugs, including repurposing of available drugs | 4 |
| Genomic sequencing of SARS-CoV-2 and studies on the epidemiology and mathematical modelling of the COVID-19 pandemic | 3 |
| Epidemiological studies and clinical trials to evaluate the overlap of SARS-CoV-2 and comorbidities, especially tuberculosis | 3 |
| AI, ICT and HPC oriented research for COVID-19 drugs design, vaccine development, treatment, clinical trials and public health infrastructures and systems | 1 |

Approx. cumulative allocation per project for 2 years: 500-900k USD

# BRICS STI Framework Programme

## 2nd phase of BRICS STI FP implementation tracks

### Launch of 5th BRICS STI Call

- **10 thematic areas**
- **Two-step submission procedure**
- **12 research funding agencies**

  New funding agencies (South Africa):
  - Technology Innovation Agency (TIA)
  - Water Research Commission (WRC)
- **Science, technology and innovation projects**
- **Projects duration: 2 or 3 years**
- **Pre-proposals submission period:**
  **30 August 2021 – 14 October 2021**

### BRICS STI Flagship projects

**Under development…**

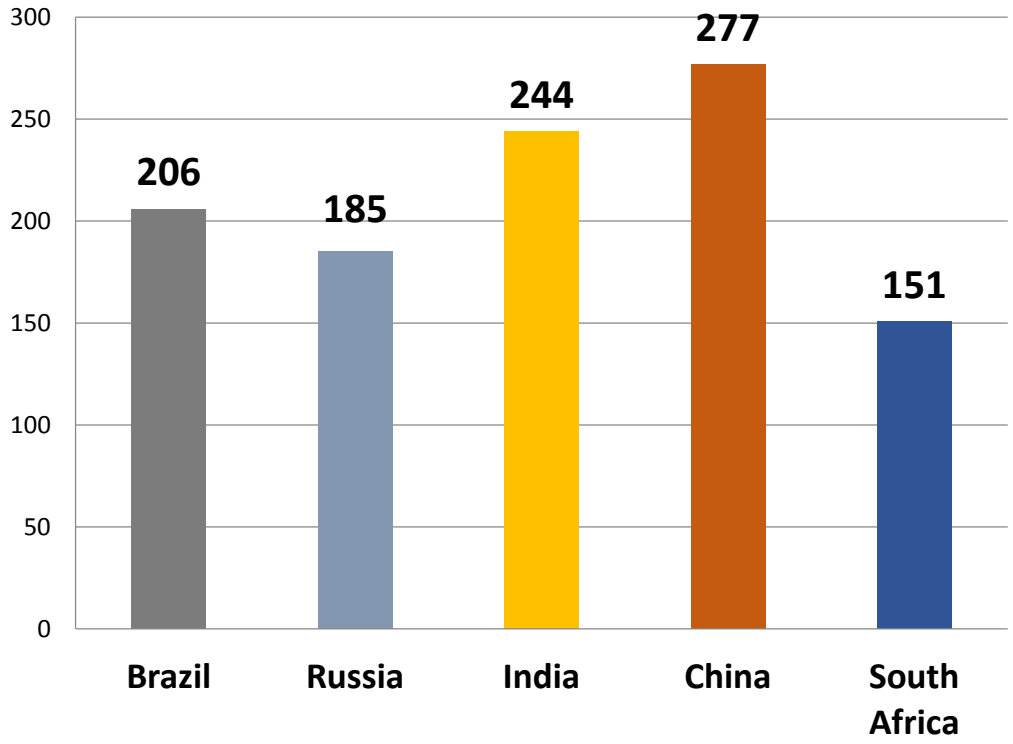
# 5th BRICS STI FP call 2021

## Thematic areas

- Transient astronomical events and Deep Survey science;
- Antimicrobial resistance: technologies for diagnosis and treatment;
- Simulation and big data analytics for advanced precision medicine and public healthcare;
- HPC and BigData for Sustainable Development: Solving Large Scale Ecological, Climate and Pollution problems;
- Innovation and entrepreneurship on Photonics, Nanophotonics and metamaterials for addressing bio-medicine, agriculture, food industry and energy harvesting issues;
- Materials science and nanotechnology for addressing environmental, climate change, agricultural, food and energy issues;
- Renewable energy, including smart grid integration;
- Ocean and polar science and technology;
- Water treatment technology;
- Research in aeronautics and aerospace;

## 333 applications submitted to the call

### National teams in submitted projects



## Discussion on the Flagship projects and concept development

**BRICS Flagship Projects** are research and development projects that are of strategic importance to BRICS member states. A flagship project is inter-disciplinary in scope, addresses an important societal challenge, is led by accomplished scientists (and related personnel) from BRICS countries.

Flagship projects have a very clear and easily identifiable vision with focused, long-term initiatives, that include short- and medium-term objectives and deliverables.

BRICS Flagship Projects aim at the horizontal and/or vertical integration of the value chain and thus at the technological feasibility of systems solutions with a long-term potential for growth.

BRICS Flagship projects are to be selected as a result of a special call for proposals;

# BRICS STI Flagship projects

## Discussion on the Flagship projects and concept development

- BRICS Flagship Projects should lead to a strong impact, whether it will be a technological advancement, societal or scientific impact;

- BRICS Flagship Projects should focus on global challenges, be of mission oriented approach and address common challenges of the BRICS countries;

- Project duration from 3 to 5 years;

- Inter-disciplinary approach, drawing in scientists and related personnel from a range of different disciplines and sectors;

- BRICS Flagship Project consortia must consist of partners from all 5 BRICS countries;

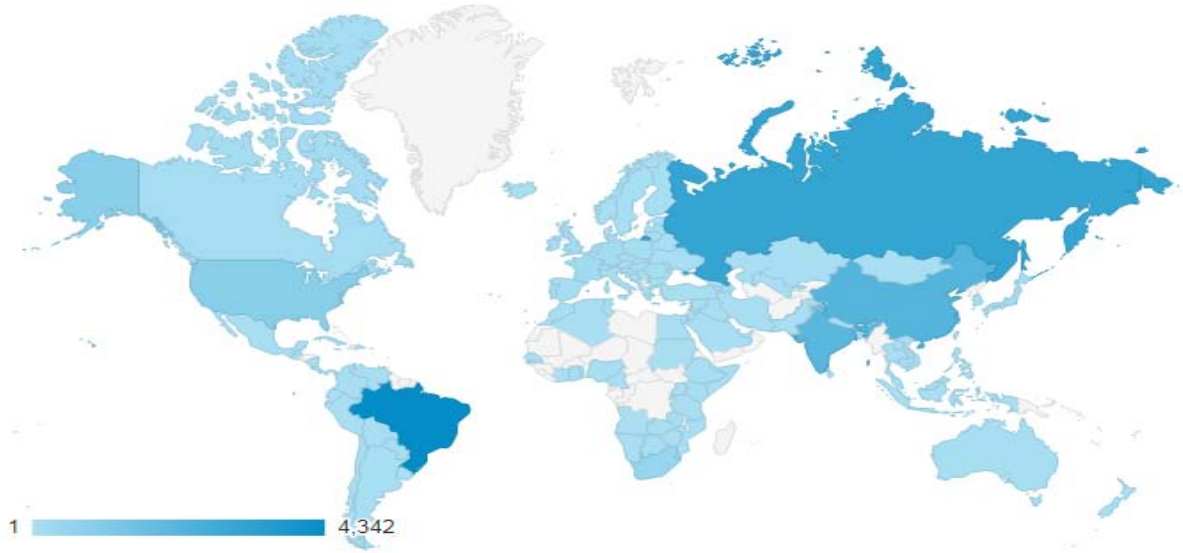
- A greater amount of funding comparing to regular BRICS projects (could be equal to between 200-500 thousand USD/EUR annually per national project partner/team).

# Supporting infomration

## BRICS STI FP website

http://brics-sti.org

- Information about BRICS STI FP
- News and events
- Information on supported projects




**BRICS STI FP Telegram: https://t.me/brics_sti**


# Thank you!

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